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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,766	09/29/2003	Richard E. Stein	279.223US2	2476

7590 06/08/2004

Schwegman, Lundberg, Woessner & Kluth, P.A.
P.O. Box 2938
Minneapolis, MN 55402

EXAMINER

CAO, CHUN

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

124

Office Action Summary

Application No.

10/673,766

Applicant(s)

STEIN ET AL.

Examiner

Chun Cao

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/29/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 and 29 of U.S. Patent No. 6,636,963 respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other because in view of the "obviousness-type" double

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patenting rational enunciated in Georgia Pacific Corp v United States Gypsum Co., 52 USPQ2d 1590, U.S. Court of Appeals Federal Circuit 1999, application claims 1-20 merely define an obvious variation of the invention claimed in US patent 6,636,963.

After analyzing the language of the claims, it is clear that claims 1-20 of the instant application is merely a **subset** of claims 1-24 and 29 of the '963 patent, and thus is an obvious variation of claim 1 of the '963 patent. Initially it should be noted that the present application of parent patent 6,636,963, having the same inventive entity. The Assignee in both applications is the same. The entire disclosures of the instant application and the patent are identical.

Claim Rejections - 35 U.S.C. § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). The following term lack antecedent basic:

"the programmer"--claims 2-20.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 5-7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laney et al (Laney), U.S. Patent No. 5,710,930 in view of Davis (Davis), U.S. Patent No. 4,959,774 and Prutchi (Prutchi), U.S. Patent No. 5,578,064.

Laney and Davis are the prior art references cited by applicant.

As to claims 1 and 10, Laney discloses an external programmer [a computer system] comprising:

a processor [22, fig.1; col. 4, lines 9-10]; input and display means [fig. 1; col. 5, lines 12-25];

a nonvolatile memory for containing executable startup code [col. 1, lines 53-57; col. 4, lines 33-34]; a volatile system memory for containing executable operating system and application software [col. 4, lines 25-29, 33-34]; a nonvolatile image storage medium; a restore routine contained within the nonvolatile memory for transitioning the system from a non-operational state to a target state by restoring a contents of volatile memory and processor registers to a target state in accordance with a target state image contained in the image storage medium and executing the operating system return routine [col. 2, lines 32-40, 56-66; col. 3, lines 31-37].

Laney does not specify disclose that a target state image saving routine executable for creating an image of a target state and storing the target state image as a target state data structure and a target state memory image in the image storage medium; and an operation system return routine for returning control of the system to

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the operating system software after execution of the execution of the target state image saving routine.

Davis discloses a system for updating a shadow memory to reflect changes in data stored by the main memory. Davis explicit teaches that a target state image saving routine executable for creating an image of a target state and storing the target state image as a target state data structure and a target state memory image in the image storage medium [Emphasis add, "since only small portion data is needed to be updated in a shadow memory to reflect the data changes of the main memory, therefore, the image of data is stored as a data structure and a memory image in the shadow memory in order to update quickly"; col. 1, lines 60-68; col. 8, lines 56-61]; and an operation system return routine for returning control of the system to the operating system software after execution of the execution of the target state image saving routine [col. 8, lines 21-44].

Laney and Davis both do not explicitly disclose a telemetry circuitry for communicating with an implantable medical device.

However, a telemetry circuitry for communicating with an implantable medical device that is old and well known in the art. Such as, Prutchi discloses an external programmer communicates with an implantable device via telemetry circuitry [fig. 1; col. 3, line 66-col. 4, line 4].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Laney and Davis and Prutchi because Davis' specific technique of image saving routine would improve the integrity and efficiency of Laney's system to allow

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dynamically updating an image data and the specific teachings of Prutchi stated above would improve the functionality of Laney to allow Laney's system to communicate with an implantable device as Prutchi teachings.

As per claim 3, Laney discloses the image storage medium is flash ROM memory [col. 4, lines 30-36].

As per claim 5, inherently, Laney discloses the target image contained in the image storage medium includes contents of video memory [col. 3, lines 31-37, 50-58. Since the image contained all contents of memory into the nonvolatile memory before power off, therefore, a content of video memory is stored as well in the image].

As per claim 6, Laney discloses that a startup code in the nonvolatile memory that initializes hardware register with preset value prior to execution of the restore routine [col. 3, lines 34-38; col. 7, lines 8-11].

As the limitations set forth claims 7 and 9 are directed to implementations implementing the system of claim 1. As discussed above, Laney and Davis and Prutchi teach the system of claim 1. It is for this reason, at the time of the invention, one of ordinary skill in the art would have readily recognized that Laney and Davis and Prutchi may obviously also teach the implementations of the system of claim 1 as set forth in claims 7 and 9. Therefore, claims 7 and 9 are rejected under the same rationale with respect to claim 1.

7. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laney et al (Laney), U.S. Patent No. 5,710,930 and Davis (Davis), U.S. Patent No. 4,959,774

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and Prutchi (Prutchi), U.S. Patent No. 5,578,064 as applied to claim 1 above, and further in view of IBM Technical Disclosure Bulletin, "Hibernating and Resuming using a Compressed Memory Image", vol. 38, No. 8 August 1995, Page 73 (hereinafter, "TDB").

TDB is a prior art reference cited by applicant.

As per claim 2, Laney and Davis and Prutchi fail to teach of comprising a compressed copy of the content of nonvolatile memory in the target state and storing the memory image in volatile memory in a manner that restores the page frames of the target state.

TDB teaches of comprising a compressed copy of the content of nonvolatile memory in the target state [page 73, lines 1-6] and storing the memory image in volatile memory in a manner that restores the page frames of the target state [page 73, lines 15-21]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Laney and Davis and Prutchi and TDB because TDB's specific teachings above would improve performance of Laney's system and allow data storing efficiency in the image storage medium.

Allowable Subject Matter

8. Claims 4, 8 and 11-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Kay et al., US patent no. 6,411,850 discloses an external programmer [16] communicate with an implantable device [10] via telemetry circuitry [fig. 2].

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao at (703) 308-6106. The examiner can normally be reached on Monday-Friday from 7:30 am - 4:00 pm. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor Thomas Lee can be reached at (703) 305-9717. The fax number for this Art Unit is following: Official (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 306-5631.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chun Cao

June 7, 2004